

Amendments to the Claims

Please cancel Claims 4-6 and Claim 30. Please amend Claims 1, 7, 11 and 15. The Claim Listing below will replace all prior versions of the claims in the application:

Claim Listing

Claim 1. (Currently amended) An isolated nucleic acid molecule encoding a polypeptide having improved thermostable cellulase activity and encoded by the amino acids of at least about 85% identity compared to SEQ ID NO: 2, wherein said nucleic acid is truncated such that one or more of the amino acid residues corresponding to from position one to about position 40 in the corresponding SEQ ID NO: 2 are deleted in the polypeptide encoded by said nucleic acid molecule, wherein said polypeptide is more soluble and has a specific cellulase activity that is at least two times greater than the specific activity of the polypeptide having the full-length sequence of SEQ ID NO: 2 using carboxymethyl cellulose as substrate.

Claim 2. (Previously presented) A nucleic acid construct comprising the nucleic acid molecule of Claim 1 operably linked to a regulatory sequence.

Claim 3. (Previously presented) A host cell comprising the nucleic acid construct of Claim 2.

Claims 4 - 6 (Cancelled)

Claim 7. (Currently amended) An isolated nucleic acid molecule encoding a polypeptide having improved thermostable cellulase activity compared to its full-length native counterpart, said nucleic acid molecule having a nucleotide sequence selected from the group consisting of: nucleotides 52-783 of SEQ ID NO: 3, nucleotides 55-783 of SEQ ID NO: 3, nucleotides 58-783 of SEQ ID NO: 3, nucleotides 61-783 of SEQ ID NO: 3, nucleotides 64-783 of SEQ ID NO: 3, nucleotides 67-783

of SEQ ID NO: 3, nucleotides 70-783 of SEQ ID NO: 3, nucleotides 73-783 of SEQ ID NO: 3, nucleotides 76-783 of SEQ ID NO: 3, nucleotides 79-783 of SEQ ID NO: 3 and nucleotides 82-783 of SEQ ID NO: 3.

Claim 8. (Previously presented) A nucleic acid construct comprising the nucleic acid of Claim 7 operably linked to a regulatory sequence.

Claim 9. (Previously presented) A host cell comprising the nucleic acid construct of Claim 8.

Claim 10. (Previously presented) The isolated nucleic acid molecule of Claim 7 wherein the nucleic acid has the sequence of nucleotides 52-783 of SEQ ID NO: 3.

Claim 11. (Currently amended) An isolated nucleic acid molecule ~~encoding a polypeptide having improved thermostable cellulase activity compared to its native full-length counterpart, said nucleic acid~~ having a nucleotide sequence selected from the group consisting of: nucleotides 85-783 SEQ ID NO: 3, nucleotides 88-783 of SEQ ID NO: 3, nucleotides 91-783 of SEQ ID NO: 3, nucleotides 94-783 of SEQ ID NO: 3, nucleotides 97-783 of SEQ ID NO: 3, nucleotides 100-783 of SEQ ID NO: 3, nucleotides 103-783 of SEQ ID NO: 3, nucleotides 106-783 of SEQ ID NO: 3, nucleotides 109-783 of SEQ ID NO: 3; and nucleotides 112-783 of SEQ ID NO: 3.

Claim 12. (Previously presented) A nucleic acid construct comprising the nucleic acid molecule of Claim 11 operably linked to a regulatory sequence.

Claim 13. (Previously presented) A host cell comprising the nucleic acid construct of Claim 12.

Claim 14. (Previously presented) The isolated nucleic acid molecule of Claim 11 wherein the nucleic acid sequence comprises the sequence of nucleotides 112-783 of SEQ ID NO: 3.

Claim 15. (Currently amended) An isolated nucleic acid molecule encoding a fusion protein comprising a thermostable cellulase encoded by the amino acids of [improved thermostable cellulase activity and at least about 85% identity compared to] SEQ ID NO: 2 and a fusion partner wherein, said thermostable cellulase is a variant of a glycosyl hydrolase of family 12, and wherein said nucleic acid molecule is truncated such that one or more of the amino acid residues corresponding to in position one to about position 40 in SEQ ID NO: 2 are deleted in the fusion protein encoded by said nucleic acid molecule, wherein said polypeptide is more soluble and has a specific cellulase activity that is at least two times greater than the specific activity of the polypeptide having the full-length sequence of SEQ ID NO: 2 using carboxymethyl cellulose as its substrate.

Claim 16. (Cancelled)

Claim 17. (Previously presented) A nucleic acid construct comprising the nucleic acid molecule of Claim 15 operably linked to a regulatory sequence.

Claim 18. (Previously presented) A host cell comprising the nucleic acid construct of Claim 17.

Claim 19. (Previously presented) A method for producing a thermostable cellulase comprising maintaining the host cell of Claim 18 under conditions suitable for expression of said nucleic acid construct, whereby said thermostable cellulase is produced.

Claim 20. (Previously presented) A method for producing a thermostable cellulase comprising maintaining the host cell of Claim 19 under conditions suitable for expression of said nucleic acid construct, whereby said thermostable cellulase is produced.

Claim 21. (Original) A method for producing a thermostable cellulase comprising maintaining the host cell of Claim 9 under conditions suitable for expression of said construct, whereby said thermostable cellulase is produced.

Claim 22. (Original) The method of Claim 21 further comprising recovering said thermostable cellulase.

Claims 23 - 30 (Cancelled)